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ABSTRACT

This paper investigates the causes, effects, and potential situational improvements of instructors who teach outside their primary area of specialization. The study concentrates on economics and, specifically, the Economics Education 14-16 Project, which utilized a nonspecialist classroom approach. This document contains: (1) classroom observations; (2) interviews with teachers, faculty heads, and advisors; and (3) a questionnaire sent to 29 economics or business studies advisors in the southern part of England. Results indicate that: (1) the research is difficult to quantify; (2) the term nonspecialist requires further definition; (3) specialists may be needed at upper grade levels; (4) teachers should be trained in broad teaching areas; (5) nonspecialists offer links with other subjects; (6) specific problems faced by nonspecialists should be identified; (7) nonspecialists benefited from good teaching resources; and (8) a range of perceptions about nonspecialists exists. Future research suggestions, tables, and a 78-item bibliography are included; and appendices provide a list of colleges involved in the study, the interview schedule, and the questionnaire. (JHP)

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THE IMPLICATIONS OF NON-SPECIALISTS TEACHING OUTSIDE THEIR MAIN SUBJECT: A CASE STUDY WITH SPECIAL REFERENCE TO THE ECONOMICS EDUCATION 14-16 PROJECT

by

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The Implications of Non-specialists Teaching Outside their Main subject Area:a Case Study with special reference to the Economics education 14-16 Project

by

Peter G Knight,B.Sc.,M.A.

Summary

This paper investigates the causes,effects and possible improvements to the situation of non-specialists teaching outside their main subject specialisation.The study draws upon other subject areas,but concentrates on Economics and specifically upon the 14-16 Economics Education Project,which embraced the use of non-specialists in its approach.The research includes classroom observation,interviews with teachers,Heads of Faculty and Advisers,and a questionnaire sent to Economics Advisers.The observed lessons and recorded responses are analysed,and suggestions for future research and recommendations for in-service training are incorporated into the concluding section.

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1.Introduction

Do specialists teach Economics significantly better than non-specialists?Is Economics different from other subjects in this respect?Do non-specialists bring any positive benefits to the teaching of Economics?In what ways can non-specialists be given help?How big in quantitative and qualitative terms is the 'problem' of non-specialism?Are we clear what we mean by non-specialism?This study attempts to explore the answers to these questions.

2.Research Design

Ary, Jacobs and Razavich in an "Introduction to Educational Research" clearly map out the scientific approach from definition of the problem, hypothesis, deductive reasoning, collection and analysis of data to the final confirmation or rejection of the hypothesis. However this study seemed to fit that described by Good:"Actually, the process of conducting research ... is rather informal, sometimes illogical, and occasionally a disorderly-appearing affair."(Good, 1963, p3)
This is not meant to imply that no coherent strategy was employed, but the nature of the study compelled the use of a variety of approaches, some of which worked much better than others.It soon became obvious in the pilot interviews and questionnaires that there were very contrasting views, held by people within the educational world, on the issue of non-specialism,and that exploratory work was needed in an attempt to try to generate possible hypotheses and indeed to try to identify the specific nature of the problem of using non-specialists.
It was initially intended to write to various colleges involved in teacher retraining or inservice training, to see if they had any written documents or thoughts on the use of non-specialists. A list of the 12 colleges contacted is found in Appendix I. Five replied by letter and two telephoned. None of those who replied felt themselves able to help, but they did suggest either other people or organisations who might, and one suggested the Cockcroft Report (pages 625-631 and Appendix I). This latter suggestion proved the most helpful. The others proved to be dead ends in terms of concrete material, in that it appears that those involved in the retraining of teachers have not written their experiences into policy statements. This could be for all sorts of reasons - like lack of time, low priority, etc., but in telephone conversations, the impression was gained that there were two main reasons. Firstly, the problems of non-specialists were difficult to classify, because many of them varied according to the personality/psychological make-up of the teacher. Secondly, teachers had so many problems with which they needed help that non-specialism was not a sufficiently important category to use as the basis for guidance. It appeared that further pursuit of this line of enquiry would not produce adequate returns. Therefore the following approach was adopted.
Firstly, non-specialists teaching Economic lessons were observed, and two Humanities teachers who were keen to extend their Economic expertise were studied in some depth.
Secondly, several people who had been in the position of being a non-specialist in a variety of subject areas were interviewed. This data was then compared with the views of those who had experience of authority over non-specialists by interviewing some Heads of Faculty and two Advisers.
Thirdly, a questionnaire was sent to 29 Advisers in England and Wales in an attempt to establish patterns of non-specialist problems, advantages, limitations, etc.
A lot of sections one and two were done in the researcher's school,for two reasons. Firstly, a cross-reference picture of non-specialists would be built up, with sometimes 2/3 different people commenting on a particular non-specialist. Secondly, several Headteachers in the LEA said that they had no non-specialists in their school. Since the LEA had just undergone a major reorganisation, it could be true that staff were all teaching their main specialism, but the impression gained, supported by some evidence of who was teaching what, was that some Heads found it vaguely insulting, or at least suggesting low status of their school, that there were any non-specialists in their school. Moreover a couple of teachers

who were prepared to be interviewed would only do so inside school hours, given the total withdrawal of goodwill, and since the researcher's 'free' periods did not coincide, the interviews had to be abandoned.

A.Observation of Lessons

An R.E./Humanities specialist and a Geographer/Humanities specialist were observed teaching a total of four lessons using Economic material, and a Mathematician and a Humanities teacher were observed jointly teaching a Maths lesson. Initially, the researcher gave material to the Humanities teachers, but they were very excited by the 14-16 approach and were quick to develop their own ideas and materials. One developed a very complicated trading game which is discussed later. All the lessons were followed up with discussions with the teachers about what had gone on, and all the above teachers were interviewed using a structured interview schedule which is described in the next section.
The reason for concentration on one particular school was that,since the researcher taught there, he had a good relationship with the teachers concerned and would begin to build together a case study of the impact of non-specialism within a school.

B.The Interviews
Seven teachers, 4 Heads of Faculty and 2 Advisers were interviewed. Given that the variables affecting non-specialism were unknown, the use of an interview where lines of thought could be developed was exploratory. The real problem was whether to use structured or non-structured interviews.Pilot interviews showed that unstructured interviews would be very difficult to collate, especially since people tended to jump all over the place and often change their mind during the course of the interview. Indeed a structured interview seemed to offer security within which they could develop their ideas, some of which were self-contradictory. It was therefore decided to use a structured interview as shown in Appendix II, but this interview was flexible and allowed people full scope to develop their arguments. Most people enjoyed the opportunity to talk about their experiences with a colleague who shared a similar experience and a common language and the interviews normally lasted about an hour, which was longer than the actual structure suggests should be the case.
The structure was further modified when interviewing Heads of Faculty and Advisers to see how they identified weaknesses and how they helped non-specialists. The main weakness of the interview was that non-specialists were being asked to 'guess' what their weaknesses and problems were and they did this by comparing their non-specialist teaching with their own specialist teaching. How far one can compare teaching in different subject areas is debatable, but a range of teachers was interviewed in an effort to isolate the differences Economics might have for non-specialists relative to other subjects.

C.The Questionnaire

Having observed lessons and then interviewed teachers, the researcher was now in a position to attempt to quantify some of the variables that seemed important, by sending out a questionnaire to Economics Advisers. The relatively small sample sent out (29) means that its relevance was limited in size and by area.
Originally the addresses of Economic Advisers were sought in the 1986 Educational Authorities Directory. However there were few Economic Advisers mentioned and many of those that were had several possible teacher centre locations where they might be. Fortunately the researcher's tutor provided a list of advisers in the southern half of England. Despite three telephone calls and a letter to Manchester University, the list of northern Economic Advisers could not be obtained, so the questionnaire is geographically distorted, though there is no reason to suspect this should affect the results of this particular study. Furthermore there was insufficient time to follow up non-respondents which further limits the significance of the results.

The other disadvantages of using a questionnaire were as follows. Firstly, the attempt to find quantifiable general patterns might disguise some of the unique features that the case study approach tries to highlight.
Secondly, anything not covered in the structure will probably be missed, since the final gesture to interviewees to add any other comments comes at the end when they are tired. The opportunity given to teachers to alter the draft copy of the interview was not taken up by any of the teachers.
After a pilot questionnaire, an explanatory cover note was sent, together with the questionnaires and stamped self-addressed envelopes to 29 Advisers, who were guaranteed anonymity.

3.Results

A.Observation of Lessons

A total of 5 x 45 minute lessons were observed, and the researcher talked to the teachers after each lesson to discuss what had happened. The purpose of these lessons was to generate ideas, so the use of a systematic observational schedule like the Flanders system was inappropriate. Instead, the teachers' talk dictated what was important. In order to see a wide range of lesson types, the following lessons were seen:
1. An R.E./Philosophy specialist, employed as a Humanities teacher teaching a group of 1st years. He was given the task of teaching what factors affect the price of goods and a set of 30 "Flower Seller photos" (see Appendix III).
2. Was a Geographer, employed as a Humanities teacher, teaching exactly the same lesson as above but to 3rd years.
3. and 4. involved the above two teachers teaching 3rd years Unit H of the 14-16 Project at the Bus Stop,i.e. Lessons 1. and 2. they were given no help in how to structure an Economics lesson, but lots of help in lesson 3. and 4. from the Teacher Guidance Notes.
5. This lesson involved the same R.E./Philosopher teaching a Maths lesson to 1st years in a team teaching situation with a Mathematics specialist.
The following observations derive from discussions with the teachers concerned. Points from several lessons are drawn together in an attempt to form a logical pattern of tendencies, but this format unfortunately detracts from the description of individual lessons, all of which were immensely interesting to study.
Unstructured Flower Seller Lessons
1. Even though both teachers had been given a very clear objective: "What factors influence the price of goods?" the teachers added their own as well, e.g. the Geographer aimed to have an orderly discussion, since the class had poor study habits and this he said overruled the quality of ideas generated in the discussion with the children. e.g. the R.E. specialist wanted to add the moral implications by seeing what factors should influence the price of goods.
2. It is important to know the background of the teacher in order to understand how they will structure the lesson.
The R.E./Philosopher praised all answers according to the skill of observation of the child. He built up a logical framework from the children's answers. He did not have a preconceived economic framework with which to distinguish answers with more economic potential from those with no or little economic potential.
The Geographer on the other hand did use an economic framework and he divided the children's answers into factors to do with demand, cost and profit. The Geographer had half-completed an A-level Economics course and knowledge of this and his political stance was essential in order to understand the reasons why he structured the lesson in the way he did. For example he continued to develop exceptions to the law of demand and twist children's answers to help explain real life trading, since

another of his aims was to help children avoid the traps consumers often fall into at the local market.

3. Terminology was used very loosely and the teachers failed to see that some children were confusing price and cost. Opportunities to use terms like elasticity to explain children's ideas in economic form were not developed; but given that the lesson was with 1st and 2nd years, this was understandable. However the point was that the teachers said that they found it very difficult to express the children's answers in the limited economic terminology that they knew. Even though they found the 14-16 teacher notes very useful, they wanted a section on terminology that might crop up in these lessons.
4. Even though they were non-specialists, the volume and quality of children's answers generated by the lesson was considerable. The problem appeared to be that they could not handle the answers, for two reasons. Firstly, they did not appreciate the quality of some of the answers, like 1st years grappling with the concept of elasticity of demand. Secondly, the children often expressed their thoughts in rambling fashion with several anecdotes and irrelevancies which meant it was very difficult to take out the "economic" aspect of the answer and put it into economic terminology.

Structured 14-16 Unit H at the Bus Stop

1. The teachers found the teacher's notes overwhelming and the list of key ideas, skills and attitudes too long. They also wondered why additional ideas like 'inferior' goods were added in the teacher's notes but did not appear in the objectives. In the end they had decided to start by looking at the material and then work backwards to see what they felt they could achieve given the material.
2. They found the material excellent and everyone agreed that the enthusiasm and ideas generated by it were above average. They were overwhelmed by the range of ideas and felt that many of the ideas were lost because they had not given the pupils enough time to record information. They felt that the quality of lessons was so good that they did not care whether they were using it to the maximum economic advantage, since it was so easy to get the children thinking, e.g. some of the children had referred back to some earlier work on the local transport system and had said that they had been badly taught before since there was no mention of cost or subsidies before, but this would influence what transport was available.
3. Instead of play extracts they would have preferred actors doing it on a video in a real life situation. They felt that the issues were very real and this did not seem to fit in with children reading out extracts in a classroom. However they were pleased with how seriously the children performed the play and this seemed to be related to the fact that the children realised these things could affect their lives.
4. The teachers had equated a unit of work with a lesson but realised that there was enough potential ideas for a week's work. What they would have liked was the same teachers' notes but with more additional materials, i.e. the teachers' notes were enough to cover about 4 lessons but they lacked the confidence to develop materials, since they would have seemed very inferior to the quality of the 14-16 material.

Team teaching lesson - R.E./Philosopher and Mathematician teaching a Maths lesson to 1st years

1. The aim of the lesson was to link Maths to the real world and to end "polyhedra week" in a fun way. However the non-specialist felt that the above objective could have been achieved without the complicated terminology like dodecahedron and tetrahedron used by the Maths specialist.
   Moreover, when asked why the lesson had not started with children giving real shapes from the world, the Maths specialist had been afraid that she would not have been able to put mathematical names to all of them.
2. When dealing with the real world, e.g. looking outside the classroom at a roof, there had been a marked tendency for the Maths specialist to hand the questions over to the non-specialist.
3. The Maths specialist felt that having two Humanities teachers in the room had influenced the class and that the shapes they mentioned were linked to Humanities like Kaaba, delta, arrow-head, knight's shield, etc. Moreover she felt the Humanities teacher led them off the track with a discussion, of October being the 10th month due to a change in the Roman Calendar, even though this was interesting.
   There then followed a reappraisal that the lesson was not really about linking Maths to the real world but using the real world to illustrate mathematical terms. The non-specialist and specialist argued as to whether or not these terms were important, and just because these terms cropped up later was not an acceptable justification in the eyes of the non-specialist, since they should not appear there either and the terminology interfered with the generation of ideas by the children.
4. Finally, the non-specialist had felt that the lesson employed problem-solving techniques that were general to other lessons yet neither the strategy to be used nor the links with other lessons were adequately made by the Mathematician. The latter felt that broadening this lesson would have detracted from the Maths content rather than enhanced it.

B.Interviews: Classroom teachers

The interview structure is shown in Appendix II. However, when people seemed more interested to talk about a particular topic or brought in a new idea they were allowed to wander off the structure. Seven classroom teachers were interviewed for about 50-60 minutes each. These were all teachers who were or had taught outside their main specialism.
They included:
- a Geographer teaching some Economics within a Humanities Faculty.
- an R.E./Philosopher also teaching Economic elements within a Humanities Faculty.
- a French specialist teaching German.
- an English teacher who had taught French, Commerce, Games and Drama.
- an Historian teaching Sociology.
- an Historian teaching Economics.
- a Geographer teaching History, Economics and Humanities.

4/7 were in middle schools 11-14 and 3/7 had experience of non-specialist teaching in years 11-16.
A further 6 people were interviewed who had experience of being in charge of non-specialists or helping them in advisory roles or on courses. They included four Heads of Faculty (Mathematics, Science, Commnications and Humanities) plus two with advisory experience in Business Studies/Economics. All the above had experience of 11-16.

The idea of interviewing two groups was twofold. Firstly, the wider range of people interviewed might generate more ideas. Secondly, the two groups might have had different perceptions of how effective non-specialists were and what help they needed.

Summary of Interviews with the 7 classroom teachers (See Interview Schedule in Appendix II for full questions) Numbers refer to questions.

1. There were 2 women and 5 men interviewed.
2. The range of teaching experience went from 2 years to 16. Theaverage being 6 years.
3. + 4. The purpose of these two questions was to establish in which area the non-specialism occurred. This proved quite difficult at times.For example, the French teacher had no language qualifications in German but had covered quite a lot of the history and political structure of Germany within the European Studies section of her degree.

A Humanities teacher had a degree in Philosophy and a P.G.C.E. in R.E. main and Humanities subsidiary. However he said the Humanities course at College involved "sitting around in groups devising lesson plans with no overall structure, no philosophy of curriculum and was not linked to why we should have Humanities. It was a complete "waste of time". Thus when applying for posts he would be qualified on paper but not in reality. A similar example came from the Geography specialist who on paper had a Humanities qualification but had spent all his time "on Geography since the Humanities lectures were either boring, cancelled at the last minute or clashed with my hobby".

5. This question about why teach it if you are not specialised in it was designed to find out whether people were forced into it or chose to teach it.I had a complete range of responses. The French specialist had to teach German as a condition for getting the job. The English specialist did not question being told to teach other subjects,it was just "part of the job" when he started teaching 16 years ago. One Humanities teacher was slightly pressured into teaching Mathematics since his timetable commitment was very low whilst others chose to teach outside their specialism for interest. Three had tried to teach related subjects because they felt this would enhance their own specialism. Everyone accepted that in teaching it was 'natural' to teach outside one's specialism. It only became an objectional thing to do if there was little or no negotiation over what one taught. Otherwise people positively appreciated the opportunity for variety and self-development that teaching other subjects brought. The reasons for doing this were often complicated and could change dramatically. The English teacher wanted to teach Games until he refereed a rugby match and found that he couldn't do it. Similarly a Historian had been initially "encouraged" by a deputy head to take on Economics, but had quickly found she enjoyed it and opted for more the next year.
6. The question of whether this move into another subject area was temporary or permanent was designed to be a check on question 5. and a chance to develop ideas further.Nothing revealing came out of these answers. As expected, if the teacher had been forced into teaching a subject, the move was regarded as temporary, whereas if s/he positively wanted to teach it, the move was regarded as more permanent. However, possibly as a result of just having had reorganisation, coupled with 2 years of industrial action, all teachers found the idea of what they might be teaching in the future too unstable an idea to answer with any confidence.
7. How would teaching other subjects affect one's own specialism or promotion prospects? Obviously the sample involved is too small to generalise, but two patterns emerged to this question. One pattern was that if teachers were in any way pushed into another subject then they tried to limit its impact; they did not want inservice training and would drop the subject as early as possible. Secondly, those who had chosen to teach another subject wanted to develop their expertise and three felt that the wider teaching experience they could offer would improve their promotion prospects.No-one mentioned the varying status of subjects as a reason for teaching outside one's specialism. The R.E./Philosopher realised that both his subject specialisms had a poor image in many schools, but he was interested in other subjects and "their relative status in the eyes of my

colleagues or the hierarchy never entered my calculations". However this seemed to contradict a later statement he made: "You must convince other teachers that you are competent in that area otherwise you lose out". He was the only one who stressed the positive side effects of teaching Mathematics - his statistics had improved, links with his own subject area had been established and "I've seen other teaching styles".

8. What are the problems and weaknesses of teaching outside your specialism? This was probably the most important question but very difficult to answer since teachers would have no point of reference? Presumably only specialists are really in a position to identify their weaknesses. However the teachers believed they could fruitfully compare their non-specialist teaching with their own specialist teaching. Most stressed that the majority of problems were common to both and were often not related to subject specialisation, but issues like mixed ability teaching, lack of resources and motivation.

No clear cut pattern of responses occurred, with different people emphasising different problems. The only problem that no one mentioned, even though the list was systematically gone through with each person, was G: Bias. The problems appeared to vary according to three main factors. Firstly, people who opted to teach a non-specialism "tried harder" and experienced fewer problems initially, but some then said the more they got into a subject a "host of new problems cropped up which I took as a measure of my success at going deeper". Secondly, different subject teachers varied in the way they structured their lessons The French teacher built up German step-by-step and felt she wanted lots more guidance as to where she should be heading. The Humanities teachers tended to see topics in isolation and liked the 14-16 units' flexibility since they could be used in any order. Thirdly, there were considerable variations in the amount of help that was given by the Heads of Department. Some got teacher notes, weekly chats, etc., whilst at the other extreme the English teacher regarded himself as a "mere middleman, I was given the lesson in Commerce one week and taught it the next. No one spoke to me about how well or badly I was doing". Indeed the French teacher, far from being encouraged, was criticised by her Adviser for having a "bad German accent" and generally not given the encouragement one would hope for.

In general, five interesting points stood out from this question.Firstly, everyone felt there was a certain 'mysterious' quality, perhaps linked to ability to motivate pupils, that meant their specialist teaching was superior. Four people mentioned, however, that they had been given younger groups, where the problems of motivation were greater anyway. The French teacher felt that she would be unable to motivate "this group even if I used all the techniques I've got in French". Secondly, the idea of avoiding teaching certain topics was full of contradictions. At first, three said that if they could not understand then they certainly would not teach it to the children and since this was not the case they never avoided any topics. Two of these later admitted "skipping" topics or "I covered deserts very quickly". Another contradiction was illustrated by two teachers, who said that resource based learning meant there was no need to avoid anything since the lessons are pupil centred, but who later argued that they avoided teaching "demand and supply as far as possible since it always means I'm stuck at the front and the 14-16 units like price of perm only confuse me further".

Thirdly, one person said that his control of children varied according to what he was teaching. When he was teaching his own subject he was confident and would give the children more freedom and an opportunity to talk around the subject. However when teaching Commerce he rigidly structured the lesson, making sure the children "had lots to get on with so as to discourage questions which would show up my total ignorance". Similarly the French teacher had developed strategies to disguise her ignorance with statements like "we'll do that in the coming weeks" or "that's too complicated for you to understand".

The fourth point is in stark contrast to the above where the Geography specialist openly told the children of his ignorance of Economics. He felt that this improved his teaching in many ways. The children made more of an effort to learn with him. The fact that he couldn't jump in to finish their answers, which he did as a specialist, meant the children had to think more for themselves. The admission of ignorance was more honest and stressed the importance of the ability

to find out which he wanted the children to grasp. Moreover he believed a better "cooperative learning environment" was established which broke down the traditional image of the teacher as "he who knows".

Finally, the different aims of specialist and non-specialist proved interesting. One non-specialist believed his aim was "survival and to avoid damaging my status in the eyes of children by showing my ignorance". The R.E. specialist said his aim was different and "geared to how I see their development should be according to my subject". By this he meant that above and beyond the objectives for each lesson, his aim was to use the teaching of other subjects to improve his own specialism by gaining knowledge of other teaching styles and of children's capacity for learning. On teaching Mathematics he had discovered that children "should know X, Y, Z yet on entering my Humanities class they showed a universal blank memory bank of any cognition of them". It seemed to him that children do separate different subjects and they will not transfer techniques between subject areas. He felt that if everyone "at least had knowledge of other people's curriculum then the children couldn't fool us any more. In reality the only way we'll have the time to look at each other is by actually teaching the subject."

Everyone agreed that most of the problems could be overcome if they had the time and resources, there was nothing "inherently conceptually beyond me" that could not be handled. There were very few problems in the first three years, but many felt specialisation was important at O-level but at C.S.E. level many felt that they could cope by "common sense" and "keeping one chapter ahead". Two expressed the view that if the 14-16 Project reflected the new G.C.S.E., style then specialisation "could go out of the window". Two Historians expressed this view believing that developments in Schools' Council History, whilst similar in style to 14-16, were in fact "far superior in their strategically structured pattern of skills and development".

9. Did non-specialists bring any good points to these subjects?

Modesty may have caused the answers to this question to be rather limited. For example the English specialist felt he was "more aware of the problems children faced trying to understand Commerce", but added "but then I haven't the expertise to sort out the problems like a specialist". One of the main responses to this question did concern the empathy the teacher would have with the children and a better understanding of the conceptual difficulties they would encounter. Typical of such comments were those made by the French teacher: "I never over-estimate the children's level."

"Because I'm learning it I can understand them better."

"You're so far ahead if you've got a degree you forget what it's like to be a learner."

Indeed, many turned this question slightly round to talk not of their strengths but of the weaknesses of the specialist. Three felt that there was a danger that specialists might be too traditional and might reject new approaches, whereas "newcomers would simply accept it not knowing anything else". Likewise the R.E. specialist felt that specialists too often suffered from "tunnel vision" and failed to "exploit opportunities of linking with other subjects".

Most felt that the greater variety of their teaching made them better teachers all round and they prepared more thoroughly for their non-specialist lessons. In general the answers appeared to hinge on how much freedom they were given in their specialism. The English specialist who was simply given Commerce lessons felt he contributed nothing, whereas the R.E. specialist felt he had helped bring about "a climate of change in the Mathematics department. The Head of Maths was surprised at how much discussion and group work I did in Maths and they are now exploring mixed ability in year one."

There are two Humanities teachers teaching Maths and together they do appear to have speeded up movement along the mixed ability road but the Head of Maths is always on the look out for ways of improving his department.

10. The amount of help they got and wanted varied considerably. In general the question was poorly answered. Everyone said they could get help if they wanted it, and there was normally enough help in the materials provided. Indeed the two Historians found the teacher notes in the 14-16 Project too time consuming and longed for "little summaries of what the lesson was really

about". In terms of the help they wanted, it was mainly in terms of psychological support - reassurance that they were doing all right and more involvement in the Faculty in question. Many felt isolated and simply wanted more time to talk to other teachers about how their lessons were going and the problems they faced. They did not seem to mind if this was the Head of Faculty or any other teacher, specialist or otherwise, just another educationalist to swap ideas with.

11. No one had had any reaction from other teachers, children or colleagues about their non-specialism. Even the Geography specialist who told the children of his non-specialism found that the children "soon seem to forget what I had said". Two expressed surprise at the question, arguing that children could not possibly know that they were non-specialists "they simply haven't got the knowledge".

12. This question was explained in terms of two extreme positions. At one end of the spectrum were those who felt being a good communicator meant you could teach anything, whilst at the other end were those who advocated total specialisation. Teachers were then asked roughly where they felt their beliefs were along this spectrum. Although the language and thoughts expressed in the answers were very different, three main points stood out very clearly.Firstly, everyone said it depended upon the particular subject in question. Most seem to distinguish 'technical' subjects like German, Maths and Science, that needed specialists, from "general experience" subjects like English, Economics, History, where since "everyone comes across these in everyday life, non-specialists can get by, by using their everyday life experiences".

Secondly, everyone said that they were both important. It was essential to be a good communicator and motivator but "specialisation was more than just icing on the cake". Two expressed a dislike for the way the concepts were placed at opposite ends of a spectrum, rather than as complementary attributes needed by a good teacher.

Thirdly, most could not make up their minds and waivered, or qualified their answers. For example, two were categorical that being a good classroom communicator was the key, but added that there was some mysterious quality that specialists brought which "I can't put my finger on but without it the lesson is flat".

13. The final opportunity to add any other comments was not really taken up since most people had covered what they wanted to say in the previous questions. The main use to which people put this question was to re-emphasise what they regarded as important. Two however did speculate on whether the G.C.S.E. would reduce the degree of specialisation needed, since they argued that the national criteria seemed to be looking for common skills and concepts between subject areas and so reduced the individal contribution which any one subject could make. One of these was an Historian who had become interested in the 14-16 material, and on further probing, she said that now she had got deeper into the subject "I'm getting confused since I bought a textbook, Harvey I think, and it doesn't match up at all with the 14-16 Project. I find the 14-16 style easy to cope with but the textbook is turning me right off."

<u>Interviews: Heads of Faculty/Advisers</u>

Four experienced Heads of Faculty (Communications, Science, Mathematics and Humanities) plus two experienced in advising Economic teachers and non-specialists using the 14-16 Project were interviewed, using a similar framework to the one used with the classroom teachers but with more emphasis on how they identified weaknesses and how they helped teachers.

1. What experience have you had with helping non-specialists?

All had had considerable experience with the Head of Mathematics stating: "I've never had a Department which hasn't had non-specialists". Interestingly two Heads of Faculty were assisted in answering by saying "surely X and Y are non-specialists and they're in your Faculty". The reason for this apparent poor knowledge by Heads of Faculty of those under them, was that in their mind X and Y were such good classroom teachers that they were not classified as non-specialists.

2. Why do you think non-specialists teach your subject?
The answers generally differed significantly from those of the classroom teacher in that they did not find the idea of being forced into it or wanting to teach it very helful. Instead their answers tended to fall into two categories. First, was the "there's a timetable problem to solve" and therefore someone had to step in to solve it, often deputy heads. Secondly, it was more to do with "jumping on curriculum band-wagons like the swing towards Integrated Science". One felt that anything new like the 14-16 Project would attract non-specialists like "bees to honey" and their interest was transient and they would move on when the next curriculum project appeared with its "fashionable buzz words". An alternative view was offered by an Adviser who felt it was 'traditional' for History and Business Studies teachers to teach Economics and teachers of subjects like Personal and Social Skills or Careers courses were always "on the look out for things to grab for their own subject".
3. What problems do you perceive non-specialists having?
All stressed that specialists had as many problems as non-specialists. Indeed one Adviser suggested Economists often had more trouble with the 14-16 material because it didn't fit "their traditional preconceptions of what Economic lessons should be like". He stressed that the 14-16 teaching strategies were more of a factor to consider than one's specialism.
In general, they said that the problems depended upon three main factors.
Firstly, the amount of interest and enthusiasm they showed. The Mathematics Head of Faculty argued that "deputies are lumbered into doing it because of slack on the timetable. Some have no enthusiasm. They don't prepare, do what they want." He added that non-specialists tend to turn up at the last minute asking for textbooks, etc., and "they are always given priority". When asked why, he said "the Maths specialists have the smallest chance of failure with a quickly made up lesson, i.e. it was in the children's best interests".
Secondly, it depended upon their style of teaching. "Talk and chalk" teachers needed more specialist knowledge compared with those who were more child centred, discovery or resourced based learning in their style. The Advisers felt that the active learning style of the 14-16 Project meant non-specialists could generate as many ideas as specialists but "they wouldn't necessarily use them properly or grasp their potential or significance".
Thirdly, it depended upon how much help the non-specialists were prepared to accept. The Head of Commnications for example said
"they don't listen, they think because they studied English at school they know how to teach it. They have no idea of how English teaching has changed." All the Heads of Faculty moaned that everyone thinks they can teach their subjects.
There was no pattern in terms of the actual problems perceived, but two are worthy of mention. Three felt that the problems were more imaginary than real and the Adviser praised the 14-16 Project for "demystifying Economics and making it more accessible to non-specialists and specialists alike". Secondly, allied to the above, was the idea that the problems were more to do with confidence. This meant people normally chose safe units in the 14-16 Project which covered familiar ground like "price of a perm, fill in boxes, calculation of costs, etc." and the "fear of letting go" meant that non-specialists "narrowed discussions". This could well be a difficult problem to overcome if the Head of Communications is correct in that non-specialists often "reject advice feeling you're attacking their competence as a whole teacher".
4. Have you any strategies for identifying the problems of non-specialists?
In general the Heads of Faculty found this question initially off-putting,arguing that they had no strategy for one of two reasons. Firstly, each individual was so different that you had to approach each teacher differently. Secondly,in teaching "I haven't the time to go looking for problems" or "it's only when something surfaces that I begin to worry about it". However they did have a host of informal ways of finding out - chats over coffee, popping into non-specialist lessons, looking at display work, looking at exercise books and so on. The Advisers similarly did not have any formal strategies but they stressed it was more important to build on people's strengths, to find out if they were good at

group work or discussions and build on this. They also stressed the need to build up relationships with teachers in order to boost their confidence.

5. In what ways have you helped non-specialists?

The general response was that people would get what help they wanted but the onus was on them to ask for it. The help seems to fall into three groups. Firstly, resources, lesson plans, teacher notes were given to non-specialists. Secondly, where possible, non-specialists would be put into team teaching situations so that they could see specialists in action. Finally, advice was offered on techniques to use, books to read, etc. They all said that they did not have the time to check on the extent to which their advice was followed. They also agreed that what help was offered depended upon their personality and needs.

Another point which was echoed time and time again was that specialists had as many problems as non-specialists. This should presumably mean that the basic skill of being a good communicator would be of paramount importance,but as we shall see later the Heads of Faculty often waivered in their answers and made contradictory statements.

6. Do non-specialists bring any advantages to teaching your subject?

A couple said that things were changing so fast in education it was difficult to know "what influenced what nowadays". Only the Head of Communications and Mathematics felt that non-specialists had been a positive asset in the following ways. Firstly, they had exposed new problems with old "successful lessons". Secondly, their continual questioning of "why do this, why that", had been very useful "in cutting out the non-essentials in the faculty". Allied to this was the fact that their lack of terminology meant that "discussions centred more around the actual concept and not labels. Specialists seem great because they answer complicated questions that are geared for specialists. Non-specialists ask naive questions that stump us." Thirdly, discussions at faculty meetings had changed the teaching style and philosophy of the Mathematics Faculty. There was now more group work and a willingness to consider new strategies of teaching. Fourthly, most agreed that nothing but good could come out of links between subjects so that people would be "more sympathetic of the problems we have to face".

7. This question again asked people to state where they were on the spectrum from believing specialists were very important, to believing that a good communicator could teach anything. Four points will be made about these answers. Firstly, everyone was 'worried' that people thought anyone could teach their own subject. Secondly, most agreed that subject specialisation was too narrow and that the ideal would be "area specialisation, teaching any of the Science subjects but not outside it" or as the Humanities Faculty
said "we all move freely about within the Social Sciences but it is stretching our ability to go beyond this". Thirdly, they all wanted both the enthusiastic good communicator, who was also a specialist. There was a tendency to say that communication was slightly more important than specialism. Fourthly, people argued that up to G.C.S.E. level specialism was unimportant. The Head of Science then changed his mind saying, "I've seen terrible Music and P.E. lessons by non-specialists in junior schools". He then went on to argue that this was presumably because it was easier to spot disasters in practical subjects and he therefore changed his mind and said subject specialism must be important. Three people admitted that they were now confused and needed time to think more clearly about how important specialism was.

8. The final question was if they had any other comments to make.

For example, had they seen any really good/bad lessons taught by non-specialists? The example given did structure their thoughts, for no other comments were received except on the example. The tone of the comments was that just as many bad lessons came from specialists and two stressed that specialists were too often in a "traditional rut and it was easier to mould new staff into what you wanted". It did seem that the term specialist was used loosely and because of its positive affective associations, teachers who were good were equated with being a specialist in the minds of other teachers without them really knowing the truth.

C.Questionnaire

As previously mentioned, this questionnaire was sent to 29 Economic/Business Studies Advisers in the southern half of England.Seventeen replies were received, i.e. 59% response rate. Five replies were also received from advisers who for various reasons, felt they could not answer the questionnaire - "it would be too costly in time to fill in part one"; "we have no non-specialists"; "we have no specialist Economics Adviser" in three cases. A full copy of the questionnaire is found in Appendix IV. This is a summary of the five sections.

1. The Background Information

This section was by far the most difficult to collate. Indeed many sections were left blank: as one Adviser stated: "these statistics are very difficult to discover even with a computer printout". In general most Economics teaching went on in the 11/16 and 11/18 secondary schools and colleges with no mention of any in middle or junior schools. There appeared to be a good spread of GCSE, A-level and Economics courses, but the extent to which non-specialists were involved in the teaching of these seemed to be an unknown factor. This could simply be because the information is not administratively collected, or as one Adviser suggested: "I really cannot accept your definition of specialist. To say that 37/64 have a first degree in Economics does not make them specialists, nor does it mean that 27/64 are not." However given that counties like Kent and Bedfordshire appeared not to know the number of specialists they employed, I suspect the former reason is nearer the truth.

2. Problems you perceive non-specialists have

Please tick the 5 most important items in each column. The distinction between most serious and most common problems had occurred in the pilot questions but in retrospect it was not very illuminating. A summary of the total figures ticked in each box follows, together with (in brackets) a percentage figure showing their relative importance.

(* % rounded to nearest ½ point)	COLUMN I most serious	* %	COLUMN II most common	* %
a. Has inappropriate aims, objectives	6	(7)	2	(2)
b. Lacks knowledge of content	14	(16½)	14	(16½)
c. Lacks anecdotes, stories to enrich lessons	4	(5)	4	(5)
d. Inadequate grasp of subjects core/structure	8	(5)	9	(10½)
e. Failure to use correct terminology	1	(1)		
f. Use of inappropriate teaching methods	8	(9½)	7	(8)
g. Dfficulty setting work at correct level	8	(9½)	8	(9½)
h. Difficulty in making or getting resources	4	(5)	8	(9½)
i. Difficulties assessing pupils' work	7	(8)	7	(8)
j. Failure to recognise bias in textbooks, etc.				
k. Avoids teaching difficult topics,	6	(7)		
l. Tendency to twist work to fit their own specialism	7	(8)	7	(8)
m. Lack of confidence	9	(10½)	15	(17½)
n. Failure to realise they need/ask for help	1	(1)	2	(2)
o. Other. Please specify	2	(2)	2	(2)
TOTAL	85	(99.5%)	85	(98.5%)

In terms of importance, the items that are most serious are:

Lacks knowledge of content - 16½%
Lack of confidence - 10½%
Use of inappropriate teaching methods - 9½%
Difficulty setting work at correct level - 9½%
Inadequate grasp of subject core - 9½%

The least important are:

Failure to recognise bias in textbooks, etc. - 0%
Failure to realise they need/ask for help - 1%
Failure to use correct terminology - 1%

There is virtually no difference between Column I and Column II except: Avoids teaching difficult subjects is regarded as 7% serious but 0% common; and the lack of confidence - 17½% common but only 10½% serious.

Three additional problems were noted:

Firstly, "a lack of understanding demonstrated by specialist colleagues". Secondly, "failure to achieve a balance". Thirdly, "difficulty in interpreting current issues, etc., in the context of syllabus".

3. Advantages non-specialists bring to Economics

Please tick the 3 most important.

Again the totals are given and the percentage response follows in brackets.

		% (rounded to nearest .5)
a. Up-to-date notes		
b. More time/thought in preparation	4	(7.5)
c. A greater breadth of knowledge	10	(19.0)
d. Use of unusual/interesting material	6	(11.5)
e. Different teaching methods	8	(15.5)
f. Different insight into Economics	14	(27.0)
g. Critical evaluation of textbooks, etc.		
h. Enthusiasm	8	(15.5)
i. Other. Please specify	2	(4.0)
Total	52	(100%)

The above chart is self-explanatory numerically, but in retrospect, it would have been helpful to have asked for an explanation of the "different insight into Economics" which figures so significantly. The two additional advantages that were added were: "cross curricular links" and "interprets jargon".

4. Help/Advice given to non-specialists

a. Identifying weaknesses/needs

No patterns emerged from this section, with varied comments like "cries of help" or "complaints from the Head". Others seemed more systematic in their approach rather than waiting for problems to appear - "by team support in regional sessions" or "observation/discussion with specialists and senior staff and teacher themselves". One Adviser assessed "all cases separately - assessed through in-service training".

b. What type of help is more useful (workshop inset, demonstrating model lessons, materials)

Unfortunately the examples in boxes were often taken as a list, so many people just said all of the above. A few more added points like "mutual support", "time to share problems with others". Two felt that a move towards Integrated Humanities would help since "all Hums subjects face the same issue".

c. Do you think in-service courses should be organised separately for non-specialists?

Eleven said No and three Yes, but sadly few reasons were given. One Adviser felt that they would "learn from each other"; another argued that non-specialists were all at different stages and to even lump them all together had bad side-effects. Another felt that the language of specialists would damage the confidence of non-specialists. The most common points were that it depended on the type of course, numbers of teachers involved and their personality. This question did appear to raise some negative comments like "they should not be teaching Economics in the first place" and "everyone thinks they can teach Economics".

5. The last question was to see where people featured on the spectrum of:
specialism is important _____ unimportant, better to integrate knowledge

Their responses often had to be interpreted from rambling statements, not all of which appeared to be relevant to the question. It seemed that two favoured specialism, three integration and the other nine who answered this were mid-way. With some it seemed a 'hedge your bets' or 'can't make up my mind' opinion, but with others it was positively trying to get the benefits of both. For example one circled both ends of the spectrum and said "I agree with both statements". Another that "I would prefer a core/foundation, inter-disciplinary approach alongside single subject options".

Eight said it depended upon the level; the higher the academic level the more the need for specialisation, though it was surprising that five of the eight only saw the need from A-level upwards. One Adviser distinguished teaching skill from specialist skill believing that the former could cover virtually everything up to A-level. Another Adviser felt that for a good teacher, the problems of being a non-specialist were only short term and would soon be overcome once the initial "demoralising psychological stage was over".

Four Advisers said that they had found the questionnaire difficult to fill in for various reasons, mainly revolving around lack of knowledge in this area. For example one Adviser wanted to know if
there was a correlation between experience and specialisation and "how clearly specialists understood the learning objectives in the 14-16 materials instead of imposing their own unsuitable ones on the material".

4.Conclusions

Limitations of this study

The extent to which one can generalise from the interviews and questionnaire is limited by several factors. Firstly, the sample was small and in the case of teachers, mainly restricted to those in a middle school for 11-14 year olds. Secondly, the Advisers often did not have the information or time to provide data on how much experience they had dealing with non-specialists. Thirdly, the timing of this work when teachers were involved in reorganisation, industrial action and with the G.C.S.E. means that issues raised about non-specialism might have appeared less important than they would under normal circumstances.
Bearing the above in mind the following results might prove useful in directing further systematic research in this area. A few hypotheses are listed at the end of this section.
Firstly, much of this area deals in the subjective and non-quantifiable. For example, confidence seems to be a key factor affecting the performance of non-specialists. Another example is that specialism seemed to be linked to professional status and thus sometimes evoked strong reactions and a defensive reaction that people were saying anyone could teach their own subject.
Secondly, future research would have to overcome the difficulties of defining non-specialism. Several colleagues were asked about their qualifications, and it was surprising how great was the range of possible connections between specialism and qualifications, e.g. one teacher specialising in Remedial work had qualifications in that area, but for a different age range than the one he was currently teaching.
Thirdly, the age at which children should encounter specialists evokes answers ranging from primary to A-level. Perhaps work needs to be done in terms of whether there can be a core of integrated/multi-disciplinary teachers plus some specialist teachers, with the mix moving towards more specialists the higher the age range. The difficulty of evaluating what is best for the children is complicated, because it seems the objectives of non-specialists and specialists can vary even when they are given the same guidance and materials, which makes comparisons very difficult.
Fourthly, allied to the above point is the need to restructure teacher training to fit more closely with the management needs of schools. Given the need for teachers to teach outside their main specialism, it is inadequate to have the present system of main and subsidiary subject. Instead broader areas need to be identified like Science, Humanities, Languages, etc., and teachers given the basic teaching methods and key content in a wider area with additional specialisation in one area.
Fifthly, Advisers, Curriculum Developers and schools need to take more positive advantage of the benefits non-specialists can offer. Their willingness to try non-traditional approaches, their understanding of the learning difficulties of children, their links with other subjects and their particular teaching styles and patterns of organisation from their own subject.
Sixthly, the problems faced by non-specialists need to be broken down into specific areas so that weaknesses can be more easily identified and guidance targeted more accurately on the exact problem. The present 'informal' system of identifying weaknesses seems more to do with lack of knowledge than anything else.
Seventhly, the reasons why non-specialists teach other subjects:
out of interest or because they are forced into them, might not be as important as first imagined. This could be because as professionals, teachers will "automatically" attempt to rectify weaknesses in their teaching or at the very least realise that it is in their own best survival interests to prepare adequately for a lesson.
Eighthly, it does appear that good teacher notes and materials, as in the 14-16 Project case, can provide non-specialists with all that is required to ensure lessons that generate lots of ideas. However, more help is needed for the non-specialist in terms of how to assess those ideas and how to build upon them.
Ninthly, there is the possibility that non-specialists organise their lessons in terms of 'discipline' of children differently from specialists. This might be due

to lack of confidence to answer questions not tied closely to the work, or to the motivation that a specialist can generate about their subject.
Finally, different people perceive non-specialism in different ways according to their situation. For example the question of whether or not non-specialists need or want help seems to be viewed differently by classroom teachers, Heads of Faculty and Advisers. Classroom teachers often appear to want more help than they get, whilst Heads of Faculty argue that their advice is sometimes rejected. Either way both groups seem to regard the issue of help as more important than the questionnaire to Advisers seems to suggest.
The above is not surprising when one considers how asking for help could be construed as an admission of weakness, with reduced promotion prospects. It would appear that as a profession, formal guideline structures should be established so that all non-specialists have far more opportunity for help which they could be free to take up or not as they saw fit.

Possible hypotheses for future research

1. The same lesson, ceteris paribus, will be more rigidly structured by the non-specialist than the specialist.
2. Non-specialists who voluntarily opt to teach Economics will be significantly better than non-specialists who are forced to teach Economics.
3. Given the same 14-16 Project units, non-specialists will have different objectives from specialists.
4. Non-specialists are better than specialists at understanding the conceptual learning problems children face.
5. Non-specialists will relate Economic lessons to the real world more frequently than specialist Economists will.
6. Lack of confidence is the biggest problem faced by non-specialists.
7. Non-specialists adopt new curriculum developments more readily than specialists.
8. Non-specialists show more links with other subjects than specialists.
9. Non-specialists use a greater variety of teaching methods than specialists.

Recommendations on the In-Service Needs of Non-Specialist Economists

Hodkinson, in "Towards Economics in an entitlement curriculum" argues that:

> "A national Economic literacy teacher training programme is a major long term task and not one which can be carried out by a simple project, centre or even a large multi-national company. It is a task which can only be implemented by an effective partnership between government .. local educational authorities and their schools .... the training institutions ... and industry and commerce.(Hodkinson & Whitehead, 1986, p250)

The small venture this study has made into the area of non-specialism does not qualify for recommendations that would merit the above long term plan, so the following recommendations are more suggestions for further reflection.

I. What help/support do non-specialists need?
Much of the help appears to be personal and psychological, involving a boost to confidence. This is perhaps best done by people who have a working relationship with the teachers in the school. However, there is also a need for more professional help provided by lecturers in colleges and through teachers' centre courses, but in order for these to be made more effective it is necessary to be more specific about the weaknesses teachers have. The questionnaire identified a variety of areas, like lack of content knowledge, inappropriate aims, etc., that are suitable for courses to alleviate, whilst others like 'avoids teaching difficult

topics', 'twisting work to suit own specialism' appear harder in a course - solution context.
The first step must be to clarify the problems and then work out which are the best strategies to deal with them. This in itself will prove difficult, since the perceptions of various people seem to highlight different issues, e.g. terminology features as important in the observations and interviews with classroom teachers, but unimportant with Advisers.

II. How can help and support be provided?
Firstly, clear demonstrations of exemplar teaching style as well as exemplar material would help.This might be partly provided byopportunities for micro teaching so that non-specialists can have their mistakes analysed in a training session.Secondly, simply observing other lessons, talking to other specialists and having the opportunity to reflect on one's teaching will help.Thirdly, more help should be given for non-specialists in the Handbooks for Economics teachers, and in subject handbooks that could offer some Economics. Holley, in a "Summary of the Findings of Phase" on page 23 mentions the inadequacies, from an Economics point of view, of the two Social Studies Handbooks. This stands in sharp contrast to the book edified by Symmes, "Economic Education: Links to the Social Studies", which is a mine of useful information to American teachers and gives useful checklists of objectives, availability of materials and so forth.Fourthly, although inservice courses obviously help, the work by Thornton and Vredeveld concluded that:

> "It appears teachers can learn some Economics simply by being exposed to Economic curricular materials which they can use in their own classrooms."(Thornton and Vredeveld,1977,p97).

Therefore more 14-16 exemplar material to fill the existing gaps,such as inflation and central government, along with a continuation of the teacher support groups, would also be helpful.
However, as noted in the observation of lessons, two Humanities teachers felt rather awed by the quality of the 14-16 material, feeling that anything they produced would look markedly inferior. This point was made by Taylor in "Research and Reform in Teacher Education" when he states:

> "Another potential weakness of extended in-service provision is that it will undermine rather than enhance the teacher's sense of mastery and professional self-confidence."(Taylor, 1978, p198)

This question of confidence leads us into the next section, which is whether or not non-specialists will be over-awed in the company of specialists.

III. Should Specialists and Non-specialists have joint or separate inservice training?
The answer to this question depends upon the aim of the course, the type of staff involved in the course (experience, qualifications, etc.) and the quality of the course organiser. Given the importance of boosting the confidence of non-specialists, it is important that they are not enrolled into courses where the theoretical level will be too demanding.
However, there are two main arguments in favour of joint courses:
Firstly, teachers will learn from each other. The non-specialists will gain knowledge of content and methods from the specialists, whilst the latter may be reminded that some of their terminology is complicated and that non-Economists do have all sorts of problems learning what appears to specialists to be easy.
Secondly, the view that specialists merely need their knowledge up-dating is out-dated. The 14-16 Project material involved new teaching methods which may be new to the specialist as well as the non-specialist.
Finally, it is not enough to provide high quality inservice courses. Teachers have to attend those courses, and given the current low morale in the profession, this will not happen in sufficient numbers unless the range of incentives for going on inservice courses is improved.
This is not just a question of finances or career prospects since staff are also motivated by peer approval and acknowledgment of improved professionalism by Headteachers.

In conclusion,the overall impression gained is that the issue of non-specialism has yet to be put into an overall context with other issues affecting teacher effectiveness. Its constituent components have as yet not been adequately analysed. The reasons for the above appear to be as follows.

Firstly, the context is all important. Are we talking about subject specialism for 8 year olds or 16 year olds? Are we talking about an ideal world or one where there are shortages of certain subject teachers?

Secondly, teacher specialism is closely linked to the very controversial area of subject integration.

Thirdly, teacher effectiveness is influenced by so many variables that a variable like non-specialism, which seems to involve unstable elements like confidence, might not be regarded as a suitable starting point for analysis.

Fourthly, there is a certain mystique around the concept of subject specialism. Positively this could be related to the nebulous enthusiasm, anecdotes, etc., that specialists have, or negatively it could be a means of justifying one's own status and role. If the former is true then any analytical approach which attempts to identify particular elements will risk the danger of losing the gestalt culmination of all the separate parts brought together in a dynamic whole by the specialist. However if the latter is true then analysis which demystifies the aura surrounding this concept will be useful.

Given that schools do appear to base their teacher selection and their curriculum around the idea of subject specialism, there has been surprisingly little work on the effect non-specialists have on children. A useful start can be made by agreeing on a common terminology so that the diverse work that has been done on teacher effectiveness can be more readily collated and developed. Then this area may receive the level of attention its importance deserves.

APPENDIX I

COLLEGES CONTACTED

1. Mini-Enterprises in Schools Project
   University of Warwick
   Westwood
   Coventry, CV4 7AL.

2. Thames Polytechnic
   Avery Hill Campus
   Bexley Road
   London, SE9 2PQ.

3. King Alfred's College
   Winchester,
   SQ22 4NR.

4. Centre for the Study of Comprehensive Schools
   Wentworth College
   University of York
   York, YO1 5DD.

5. National Association for Staff Development
   Redgrave House
   Prestbury
   Macclesfield, SK10 4BW.

6. Centre for Studies in Science and Mathematics
   University of Leeds,
   LS2 9JT.

7. Hertfordshire College of Higher Education
   Wall Hall
   Aldenham
   Watford, WD2 8AT.

8. Christ Church College of Higher Education
   North Holmes Road,
   Canterbury,
   Kent, CT1 1QU.

9. Southampton College of Higher Education
   East Park Terrace
   Southampton, SO9 4WW.

10. Bristol Polytechnic
    Redland Hill
    Bristol BS6 6UZ.

11. Chelmer Institute of Higher Education
    Victoria Road South
    Chelmsford, CM1 1LL.

12. New College Durham,
    Framwellgate Moor,
    Durham, DH1 5ES.

APPENDIX II

INTERVIEW SCHEDULE

Outline purpose. Mention Confidentiality

1. M/F 2. No. of years teaching experience

3. Main subjects taught/level

4. Qualifications: Degree
P.G.C.E.
Cert. Ed.
A/O Levels
Other

5. Why teach it if not specialism
A. Interest (why not study it earlier)

B. Forced (Who by)

C. Specialism not important

D. Drifted into it/not sure

E. Other

6. Temporary or permanent move into this subject

7. How will it affect own specialism/status/promotion

8. Problems/Weaknesses
A. Knowledge/content
B. Understanding Concepts
C. Structure/core
D. Future work
E. Inappropriate methods
F. Assessing pupils
G. Bias
H. Lack of confidence
I. Incorrect lesson level
J. Twist to suit own subject
K. Avoid certain topics
L. Finding/making resources
M. Failure to use terminology
O. Other

9. Good Points

   A. Up-to-date notes
   B. Enthusiasm
   C. Better preparation
   D. Breadth of knowledge
   E. Methods from own subject
   F. Different in-sight
   G. Other

10. What help want/not getting/who gives it

11. Reaction from

    Other teachers

    Parents

    Children

12. Communicator/how important is specialism

13. Other comment (14/16 Project)

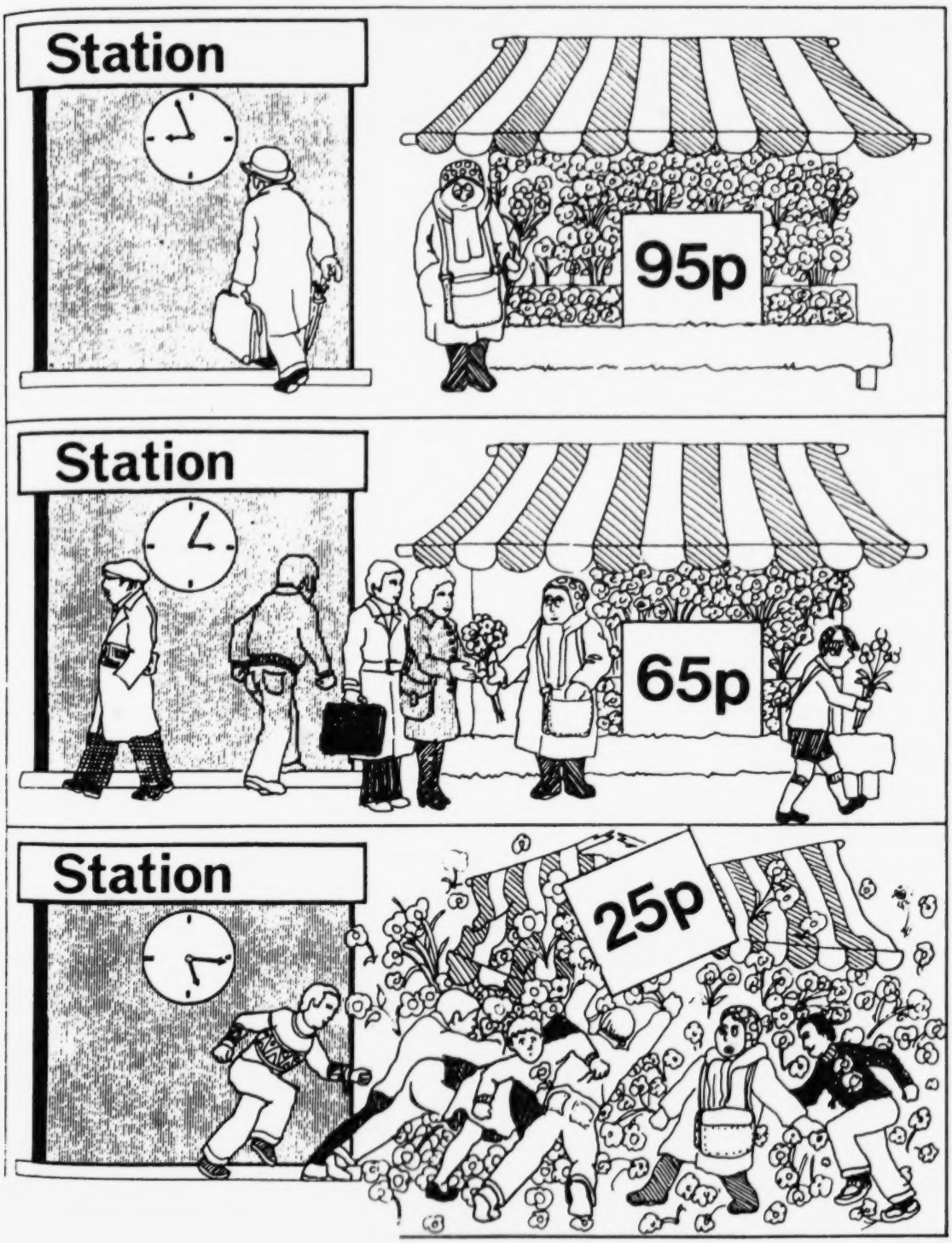
THANK YOU

Date _____

Venue _____

APPENDIX III

FLOWER SELLER LESSON MATERIAL



APPENDIX IV

QUESTIONNAIRE: NON-SPECIALISI

NAME _____

1. BACKGROUND INFORMATION
   a. Name of authority _____
   b. Total number of Economic specialists employed _____
      (A specialist defined as main, joint or subsidiary subject at college or university.)
   c. Where do they teach? Enter numbers if known.
      6th form/technical college ____
      11/16 Secondary schools ____
      11/18 Secondary schools ____
      Middle schools ____
      Junior ____

   d. How many schools teach:
      G.C.S.E. Economics ____
      A-level Economics ____
      Economic Awareness ____
      (e.g. as part of an integrated course)

      How many of these schools have non-specialists involved in the teaching of these courses _____

2. PROBLEMS YOU PERCEIVE NON-SPECIALISTS HAVE

   Please tick the 5 most important items in each column.

PROBLEM	COLUMN I (most serious)	COLUMN II (most common)
a. Has inappropriate aims, objectives		
b. Lacks knowledge of content		
c. Lacks anecdotes, stories to enrich lesson		
d. Inadequate graps of subjects core/ structure		
e. Failure to use correct terminology		
f. Use of inappropriate teaching methods		
g. Difficulty setting work at correct level		
h. Difficulty in making or getting resources		
i. Difficulties assessing pupils work		
j. Failure to recognise bias in textbooks, etc.		
k. Avoids teaching difficult topics		
l. Tendency to twist work to fit their own specialism		
m. Lack of confidence		
n. Failure to realise they need/ask for help.		
o. Other. Please specify.		

3. ADVANTAGES NON-SPECIALISTS BRING TO ECONOMICS
Please tick the 3 most important.

a. Up-to-date notes _____

b. More time/thought in preparation _____

c. A greater breadth of knowledge _____

d. Use of unusual/interesting material _____

e. Different teaching methods _____

f. Different insight into Economics. _____

g. Critical evaluation of textbooks, etc. _____

h. Enthusiasm _____

i. Other. Please specify.

4. HELP/ADVICE GIVEN TO NON-SPECIALISTS

a. How do you identify the weaknesses/needs of non-specialists?

b. What type of help do you think is most useful?
(Workshop inset, demonstrating model lesson, materials)

c. Do you think in-service courses should be organised separately for non-specialists?

6. THE IMPORTANCE OF SPECIALISM

Could you please write your final comments on where you feature on the spectrum:

Specialism is essential ---------- Unimportant, better to integrate knowledge

and any other observations

THANK YOU VERY MUCH FOR YOUR HELP

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